

Remarks

The title presented in applicant's previous amendment filed May 29, 2003, is still considered by the Examiner not to be descriptive of the claimed invention. Applicant has therefore amended the specification to adopt the title suggested by the Examiner.

Withdrawal of the objection to the drawings under 37 CFR 1.83(a) is noted and appreciated.

Pending claims 1-3, 5, 7-9, and 11 stand finally rejected under 35 U.S.C. 103(a) as being obvious, and therefore unpatentable, over Patarchi and Shtipelman of record. Claims 4 and 10 stand rejected under the same statute as being unpatentable over Patarchi and Shtipelman, in further view of Lohr. These rejections are respectfully traversed, particularly with respect to claims 1-5 and 7-11, as currently amended.

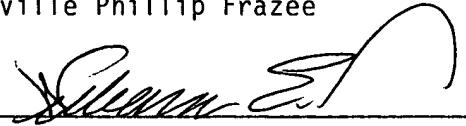
Independent claims 1 and 6 have been amended to clearly recite the important limitation that the plurality of pairs of facing ferromagnetic pole pieces fixedly mounted within applicant's motor case are equal to the even plurality of magnets encased within his rotor. As discussed in applicant's response to the prior Office Action, Patarchi teaches a number of pole piece pairs of stators that is, at the most, equal to one-half the number of rotor magnets. All of the motor embodiments described in the Patarchi reference are therefore limited in their ability to supply maximum output power. This is totally unlike applicant's claims, which have been amended to very specifically and clearly recite that his motor has equal, even numbers of stator and rotor magnetic poles. As set forth in applicant's specification, these important

structural features of applicant's claimed disk type motor produce maximum output torque for a motor having a given physical size.

It is believed that applicant's foregoing amendments and remarks clearly place this application in condition for allowance of claim 1-5 and 7-11 over all of the references of record, taken alone or in any combination. Entry of the foregoing Rule 116 amendment and favorable action thereon are accordingly earnestly solicited.

Respectfully submitted,

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October 20, 2003
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In the claims

Please amend claims 1 and 7 as set forth in the following claims listing:

1. (currently amended) A disk type D.C. motor comprising:
 - a stationary case constructed of a non-ferrous material;
 - a motor shaft positioned within the case on a central axis of the motor;
 - a rotor fixedly attached to said motor shaft perpendicular to said central axis, said rotor being in the shape of a circular disk;
 - an even plurality of magnets encased within said rotor equally spaced proximate a peripheral edge thereof, adjacent ones of the plurality of magnets being of opposite magnetic polarity;
 - a ~~[[like]]~~ plurality of pairs of facing ferromagnetic pole pieces fixedly mounted within said case, said plurality of pairs of facing ferromagnetic pole pieces being equal to said even plurality of magnets encased within said rotor, each pair of facing pole pieces being spaced in correspondence with said plurality of magnets, the facing pole pieces of each pair being positioned on opposite sides of said rotor in spaced proximity to one of said plurality of magnets, the facing pole pieces of each pair being in firm contact with a core that is mounted within said case outside said peripheral edge of said rotor, each of the cores being wound with a coil such that an electric current flowing in the coil induces a magnetic polarity in an associated pair of pole pieces.
2. (original) A motor as in claim 1, further comprising electronic

circuitry for selectively energizing the coils wound around each of the cores.

3. (original) A motor as in claim 2, wherein said electronic circuitry is operative for controlling cycle time and polarity of a voltage applied to each of the coils to thereby control the speed of the motor.

4. (original) A motor as in claim 1, further comprising an output flange fixedly attached to said motor shaft for coupling the motor to a load.

5. (original) A motor as in claim 1, wherein said plurality of magnets comprises a plurality of permanent magnets.

6. (previously canceled)

7. (currently amended) A disk type D.C. motor comprising:

a stationary case constructed of a non-ferrous material;

a motor shaft positioned within the case on a central axis of the motor;

a plurality of rotors fixedly attached to said motor shaft perpendicular to said central axis and parallel to each other, each of said rotors being in the shape of a circular disk;

an even plurality of magnets encased within each of said rotors equally spaced proximate a peripheral edge thereof, adjacent ones of the plurality of magnets being of ~~opposite~~ magnetic polarity;

a ~~[[like]]~~ plurality of pairs of facing ferromagnetic pole pieces fixedly mounted within said case, said plurality of pairs of facing ferromagnetic pole pieces being equal to said even plurality of magnets encased within said rotor, each pair of facing pole pieces being spaced in correspondence with said plurality of magnets, the facing pole pieces of each

pair being positioned on opposite sides of each of said rotors in spaced proximity to one of said plurality of magnets, the facing pole pieces of each pair being in firm contact with a core that is mounted within said case outside said peripheral edge of each of said rotors, each of the cores being wound with a coil such that an electric current flowing in the coil induces a magnetic north-south polarity in an associated pair of pole pieces.

8. (original) A motor as in claim 7, further comprising electronic circuitry for selectively energizing the coils wound around each of the cores.

9. (original) A motor as in claim 8, wherein said electronic circuitry is operative for controlling a cycle time and polarity of a voltage applied to each of the coils to thereby control the speed of the motor.

10. (original) A motor as in claim 7, further comprising an output flange fixedly attached to said motor shaft for coupling the motor to a load.

11. (original) A motor as in claim 7, wherein said plurality of magnets comprises a plurality of permanent magnets.

12. (previously canceled)